Common Thermaling Errors

- **straightening up on the best lift** of the circle, not waiting 270 degrees
  --results should be obvious by now

- **straightening up for too long** in an attempt to jumpstart the centering
  --greatly increased chance of flying out of contact with the lift. If the lift is worth centering, it's worth taking the time to do it systematically.

- **poor bank control**
  --remember, **constant bank + constant pitch = constant turn rate**. Use diagonal screws on any instrument near the top of the panel (and therefore near the horizon) to accurately gauge bank.

- **poor coordination**
  --when rolling into or out of a turn, the ONLY way to fly really accurately is to spend most of your attention (while rolling) on the nose/horizon "picture." The yaw string will be in your peripheral vision then, too, making coordination even easier. Watching the nose as the turn develops will pretty much make the yaw string redundant anyway. Once the turn has been properly established, you'll find it easy to remain coordinated with only minor corrections. **Don't forget** to return your attention to the nose/ horizon picture when rolling out of the turn!

- **poor speed control**
  --letting the nose bob up and down means accepting a changing TAS and turn radius**. Constant bank + constant pitch = constant turn rate.** Also, nice round circles means your glider will stay where you think it is—in the best lift—rather than doing the "random walk."

- **poor speed selection**
  --undoubtedly, you have heard or read advice to thermal "as slowly as possible." This advice is outdated: most modern laminar-winged sailplanes thermal best at 45° and about the speed for best L/D.

  --some pilots tend to thermal too fast, concerned about the danger of stalling. Modern gliders are designed to handle very well in thermal turns, so this really isn't an issue.

  (**Exceptions** would be when maneuvering very close to terrain—such as when ridge-soaring—and when thermaling near other gliders. In these cases, some extra speed would be prudent.)

- **attempting to relocate a thermal after contact has been lost**

  --the sink between thermals is proportionate to the climb rate within them, because the air that goes up has to return to earth nearby. Remember, a thermal is usually surrounded by a "sheath" of cooler air descending around it; in fact, it is this cooler air that is displacing the thermal and forcing it upwards.

  Here in the Great Basin, when maneuvering close to a thermal it is not uncommon to lose altitude at a rate of 800 feet/minute more more. Having found a thermal, quickly make the decision to either stop and center it, or to slow down and dolphin through it—but don't try to find it again after having passed through it!

  Exception: if you really need that particular thermal, and if you haven't the altitude to look elsewhere without risking being unable to reach a safe landing site, it is worthwhile to try to relocate the thermal. When doing so, however, you must **always** bear in mind the possibility that the thermal is no longer there; **don't** search fruitlessly for so long that you can't safely land at somewhere suitable.

- **circling in the absence of lift**

  --there is nothing sacred about the circle; it is merely a way of "parking" the glider in a small region of lift. Nothing about circling *per se* makes the glider go up! Generally speaking, it is true that a glider should only be turning if it is in lift; while turning you really aren't going anywhere, so your glide ratio is effectively zero...think about it.

  --closely related to this fault is continuing to circle after the climb rate has diminished. Pilots sometimes do this after they've lost the center and flown out of the lift; they also often do this when reaching the top of the thermal. Don't do this!

  Exception: it is appropriate to continue circling, near the very top of the thermal, if those last few feet really might make the difference in some immediate situation—for example, climbing high enough to safely cross a ridge or mountain range. In all other cases, however, you're probably better off finding a new and stronger thermal.

Constant bank + constant pitch = constant turn rate!